

We claim:

1. An aqueous dispersion obtainable by free-radical polymerization of

- 5        a) at least one N-vinyl-containing monomer and/or at least one (meth)acrylamide monomer
- b) at least one polymeric dispersant
- c) at least one polymeric precipitation agent
- d) at least one crosslinker
- 10       e) optionally further monomers
- f) optionally at least one regulator
- g) optionally a buffer substance

where the weight ratio of b) to c) is in the range from 1:50 to 1:0.02.

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2. A dispersion as claimed in claim 1, wherein the weight ratio of b) to c) is in the range from 1:20 to 1:0.05.

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3. A dispersion as claimed in claim 1 or 2, wherein

N-vinylamides and/or

N-vinyllactams and/or

(meth)acrylamide monomers chosen from the group consisting of acrylamide,

2-acrylamidoglycolic acid,

N-(tris(hydroxymethyl)methyl)acrylamide,

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N-hydroxymethylacrylamide,

N-methylacrylamide,

N-isopropylacrylamide,

2-acrylamido-2-methyl-1-propanesulfonic acid

methacrylamide,

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N-ethyl-methacrylamide,

N-hydroxymethylmethacrylamide,

N-(2-hydroxypropyl)methacrylamide,

N-methylmethacrylamide,

N-isobutoxymethylacrylamide,

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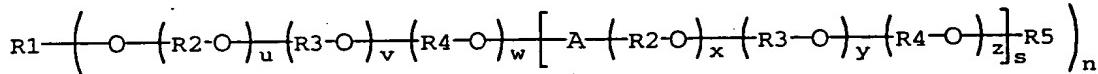
N-methoxymethylmethacrylamide

are used as monomer a).

4. A dispersion as claimed in claims 1 to 3, wherein monomer a) is chosen from the group consisting of acrylamide, methacrylamide, N-hydroxymethylacrylamide, N-(2-

hydroxypropyl)methacrylamide, N-hydroxymethylmethacrylamide, N-isopropylacrylamide.

5. A dispersion as claimed in any of claims 1 to 4, wherein the polymeric dispersant b) is chosen from the group consisting of polyvinyl acetate, polyalkylene glycols, in particular polyethylene glycols, polyvinyl alcohol, polyvinylpyridine, polyethyleneimine, polyvinylimidazole, polyvinylsuccinimide and polydiallyldimethylammonium chloride, polyvinylpyrrolidone, polymers which comprise at least 5% by weight of vinylpyrrolidone units, polymers which comprise at least 50% by weight of vinyl alcohol units, oligosaccharides, polysaccharides, oxidatively, hydrolytically or enzymatically degraded polysaccharides, chemically modified oligo- or polysaccharides, such as, in particular, carboxymethylcellulose, water-soluble starch and starch derivatives, starch esters, starch xanthanogenates, starch acetates, dextran, and mixtures thereof.
10. A dispersion as claimed in any of claims 1 to 5, wherein polymers which comprise at least 5% by weight of vinylpyrrolidone units and/or polyvinylpyrrolidone are used as polymeric dispersant b).
15. A dispersion as claimed in any of claims 1 to 6, wherein a water-soluble polyether-containing compound is used as polymeric precipitation agent c).
20. A dispersion as claimed in any of claims 1 to 7, wherein a water-soluble polyether-containing compound of the following formula (Ib) is used as polymeric precipitation agent c):



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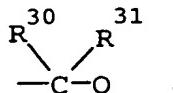
(Ib)

in which the variables, independently of one another, have the following meanings:

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|----|----------------|--|
| 30 | $R^1$          | is hydrogen, $C_1-C_{24}$ -alkyl, $R^6-C(=O)-$ , $R^6-NH-C(=O)-$ , polyalcohol radical;    |
|    | $R^5$          | is hydrogen, $C_1-C_{24}$ -alkyl, $R^6-C(=O)-$ , $R^6-NH-C(=O)-$ ;                         |
|    | $R^2$ to $R^4$ | are $-(CH_2)_2-$ , $-(CH_2)_3-$ , $-(CH_2)_4-$ , $-CH_2-CH(R^6)-$ , $-CH_2-CHOR^7-CH_2-$ ; |
| 35 | $R^6$          | is $C_1-C_{24}$ -alkyl;  |

R<sup>7</sup> is hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, R<sup>6</sup>-C(=O)-, R<sup>6</sup>-NH-C(=O)-;

A is -C(=O)-O, -C(=O)-B-C(=O)-O, -CH<sub>2</sub>-CH(-OH)-B-CH(-OH)-CH<sub>2</sub>-O, -C(=O)-NH-B-NH-C(=O)-O;



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B is -(CH<sub>2</sub>)<sub>n</sub>, arylene, optionally substituted;

R<sup>30</sup>, R<sup>31</sup> are hydrogen, C<sub>1</sub>-C<sub>24</sub>-alkyl, C<sub>1</sub>-C<sub>24</sub>-hydroxyalkyl, benzyl or phenyl;

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n is 1 when R<sup>1</sup> is not a polyalcohol radical or

n is 1 to 1000 when R<sup>1</sup> is a polyalcohol radical

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s = 0 to 1000; t = 1 to 12; u = 1 to 5000; v = 0 to 5000; w = 0 to 5000; x = 0 to 5000;

y = 0 to 5000; z = 0 to 5000.

20 9. A dispersion as claimed in any of claims 1 to 8, wherein polyalkylene glycols are used as polymeric precipitation agent c).

10. A dispersion of claims 1 to 9, wherein polyethylene glycol (PEG) is used as polymeric precipitation agent c).

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11. A dispersion as claimed in any of claims 1 to 10, wherein a compound with a molecular weight of from 300 to 100 000, preferably 1000 to 30 000, in particular 1000 to 10 000, is used as polymeric precipitation agent c).

30 12. A dispersion as claimed in any of claims 1 to 11, wherein the weight ratio of the sum of b) and c) to the sum of the remaining monomers is in the range from 10 : 1 to 1 : 0.1.

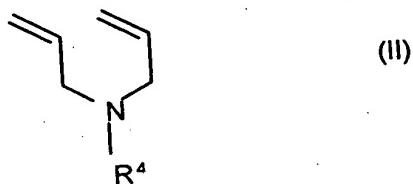
13. A dispersion as claimed in any of claims 1 to 12, wherein a cationic and/or a quaternizable monomer is used as further monomer e).

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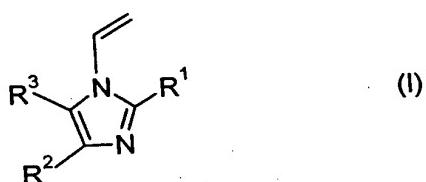
14. A dispersion as claimed in claim 13, wherein a diallylamine of the formula (II), in which R<sup>4</sup>

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is C<sub>1</sub>-C<sub>24</sub>-alkyl is used as further monomer e)



- 5 15. A dispersion as claimed in claim 13, wherein an N-vinylimidazole derivative of the formula  
 (II) in which R<sup>1</sup> to R<sup>3</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or phenyl is used as further monomer e).



16. A dispersion as claimed in any of claims 1 to 15, wherein polymers which comprise at least 5% by weight of vinylpyrrolidone units and/or polyvinylpyrrolidone are used as 10 polymeric dispersant b), and polyethylene glycol is used as precipitation agent c).
17. An aqueous solution obtainable by diluting the dispersion as claimed in any of claims 1 to 16 with water.
- 15 18. A process for the preparation of aqueous dispersions where
- a) at least one N-vinyl-containing monomer and/or at least one (meth)acrylamide monomer
  - b) at least one polymeric dispersant
  - c) at least one precipitation agent
  - d) at least one crosslinker
  - e) optionally further monomers
  - 20 f) a regulator
  - g) optionally a buffer substance
- 25 are reacted in the presence of at least one regulator f) and the weight ratio of b) to c) is in the range from 1:50 to 1:0.02.
- 30 19. A process as claimed in claim 18, wherein a multifunctional regulator is used as regulator

f).

20. A process as claimed in claim 18, wherein the resulting dispersion is subjected to hydrolysis.

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21. A process as claimed in claim 20, wherein the hydrolysis is carried out up to a content of amines in the polymer of < 20 mol%, based on component (a).

22. The use of aqueous dispersions as claimed in any of claims 1 to 17 in cosmetic preparations, in particular in hair cosmetic preparations.

- 10 23. The use of aqueous dispersions obtainable by free-radical polymerization of

15 a) at least one (meth)acrylamide monomer and optionally at least one N-vinyl-containing monomer

b) at least one polymeric dispersant

c) at least one polymeric precipitation agent

20 e) optionally further monomers

f) optionally at least one regulator

g) optionally in the presence of a buffer substance

where the weight ratio of b) to c) is in the range from 1:50 to 1:0.02 in cosmetic preparations, in particular in hair cosmetic preparations.

- 25 24. The use as claimed in claim 23, where the at least one monomer a) is as defined in claims 3 and 4.

- 25 25. The use as claimed in claims 23 and 24, where the polymeric dispersant b) and the polymeric precipitation reagent c) are as defined in claims 2 and 5 to 12 and 16.

- 30 26. The use as claimed in claims 23 to 25, where the further monomer e) is as defined in claims 13 to 15.

27. The use as claimed in claims 22 to 26 as thickener.

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28. The use as claimed in claims 22 to 26 as conditioning agent.

29. A method of increasing the viscosity of a preparation by adding an aqueous dispersion

according to one of claims 1 to 17 or by adding an aqueous dispersion according to claims 23 to 26 to the preparation and the addition of water.

30. A method as claimed in claim 29, wherein at least 2 parts by weight of water, based on the dispersion, are added to the preparation.
- 5      31. A cosmetic composition comprising, in a cosmetically acceptable medium, at least one aqueous dispersion as claimed in any of claims 1 to 17.
- 10     32. A cosmetic composition comprising, in a cosmetically acceptable medium, at least one aqueous dispersion obtainable by free-radical polymerization of
  - a) at least one (meth)acrylamide monomer and optionally at least one N-vinyl-containing monomer
  - b) at least one polymeric dispersant
  - 15       c) at least one polymeric precipitation agent
  - e) optionally further monomers
  - f) optionally at least one regulator
  - g) optionally in the presence of a buffer substance
- 20       where the weight ratio of b) to c) is in the range from 1:50 to 1:0.02 and where the at least one monomer a) is as defined in claims 3 and 4, the polymeric dispersant b) and the polymeric precipitation reagent c) are as defined in claims 2 and 5 to 12 and 16 and the further monomer e) is as defined in claims 13 to 15.